

REMARKS/ARGUMENTS

Claims 9, 10, 12-24, and 26-34 are pending in the present application. Claims 11 and 25 have been canceled. Claims 9, 12-14, 19, 22, 23, 26-28, 33 and 34 have been currently amended. Support for the amended claims can be found throughout the specification and in the original claims. Particular support for amended Claims 9 and 23 can be found on pages 11 and 22 of the specification and in original Claim 3. Particular support for amended Claims 19 and 33 can be found on pages 10 and 11 of the specification. The phrase "containing polysulfides" was deleted from Claims 12-14, 22, 26-28, and 34, to make the recitals in these claims less cumbersome to read. This deletion did not reduce the scope of coverage of these respective claims. No new matter is believed to have been introduced by these amendments.

Applicants respectfully request that the Examiner provide acknowledgment of priority document JP1999-168948, submitted in a "Request for Priority" on February 8, 2002.

Applicants also respectfully request that the Examiner review and provide acknowledgment of the related cases (2 cases) submitted in an Information Disclosure Statement, filed July 5, 2002. Applicants also would like to remind the Examiner that an Information Disclosure Statement was recently filed on April 2, 2004.

Claim Rejections under 35 U.S.C. § 102(b) and 35 U.S.C. § 103(a)

The Examiner rejected Claims 9-12, 14-21 and 23-34 under 35 U.S.C. § 102(b), as anticipated by, or in the alternative, under 35 U.S.C. § 103(a), as obvious over, Japanese Patent Application 1995-189153 (hereinafter '153 reference). Applicants respectfully traverse this rejection for the following reasons.

Applicants amended Claims 9 to state that the alkaline cooking liquor comprises polysulfide sulfur at a concentration of at least 6 g/l, calculated as sulfur. Claim 23 was amended in a similar fashion. The '153 reference appears to disclose a polysulfide sulfur concentration of at most 5.88 g/l (as sulfur) (see section [0031]); however this reference does not teach or suggest a cooking liquor that comprising a polysulfide sulfur at a concentration of at least 6.0 g/l, calculated as sulfur, in addition to the required oxidation-reduction potentials of the optimized quinone-hydroquinone compounds, as recited in Applicants' pending claims. The high polysulfide sulfur concentration and the required oxidation-reduction potentials provide further improvement in pulp yield, while reducing the amount of active alkali in the cooking liquor.

Therefore, for at least the above reasons, reference '153 does not teach or suggest the invention as now claimed, and the rejection should be withdrawn.

The Examiner rejected Claims 13, 22 and 34 under 35 U.S.C. § 103(a), as unpatentable over the '153 reference, in further view of WO 97/41295 (hereinafter the '295 reference). Applicants respectfully traverse this rejection for the following reasons.

Neither the '153 reference nor the '295 reference teach or suggest a cooking liquor comprising the combination of a polysulfide sulfur at a concentration of at least 6 g/l, calculated as sulfur, and the required oxidation-reduction potentials of the optimized quinone-hydroquinone compounds, as recited in Applicants' pending claims.

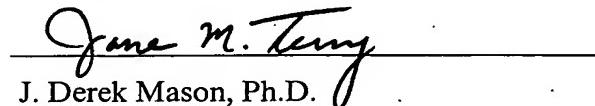
As stated above, the '153 reference does not teach or suggest a cooking liquor that comprising a polysulfide sulfur at a concentration of at least 6 g/l, calculated as sulfur, in combination with the required oxidation-reduction potentials of the optimized quinone-hydroquinone compounds. The '295 reference is directed to a method of producing polysulfides using an electrolytic cell (see Abstract). This reference does not teach or suggest the use of a high polysulfide sulfur concentration in combination with quinone-hydroquinone compounds providing the required oxidation-reduction potentials, as recited in Applicants' pending claims. This combination of high polysulfide sulfur concentration and the required oxidation-reduction potentials has been shown by the inventors to provide further improvement in pulp yield, while maintaining or improving the Kappa number, and reducing the amount of active alkali in the cooking liquor. Applicants have found that when the polysulfide sulfur level is maintained at this level, a criticality of the oxidation-reduction potential is found. When the claimed oxidation-reduction range is used, significant improvements are found in the resulting pulp. This is not suggested by the art of record.

Therefore, for at least the above reasons, the '153 reference, in view of the '295 reference, does not teach or suggest the invention as now claimed, and the rejection should be withdrawn.

Applicants respectfully submit that the present amendment now places the application in condition for allowance, and respectfully request early notice of such action.

Respectfully submitted,

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